



The EU Code of Conduct on Data Centres

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Development

Becoming a Signatory

Best Practices

Use as a procurement tool

Political context

- Carbon Reduction Commitment
- Forecasts of rising energy use in Data Centres
 - Europe 56TWh / PA 2007
 - Rising to 104TWh / PA by 2020
- Energy security

Industry context

- Many activities within Industry
- Many building standards – none relevant to data centres

Industry context

- Reduce confusion with a clear message
 - Broad review and input
 - CoC first and only system level standard
 - Lower the barrier to access and application

Goals

- Led by Paolo Bertoldi, DG JRC
 - “aim is to inform and stimulate Data Centre operators to reduce energy consumption in a cost effective manner without hampering the critical function”
- A practical voluntary commitment

Scope

- The Code of Conduct covers;
 - “Data Centres” of all sizes – server rooms to dedicated buildings
 - Both existing and new facilities
 - Mechanical plant to software

International expert review

- Contribution and review from
 - EU, UK, Japan, USA
 - Vendor specialists
 - Operators
 - Professional bodies

Substantial interest

- Broad participation and support from
 - Vendors
 - Operators
 - End user organisations



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Becoming a Signatory

Sign the code as either;

- Participant
 - Data centre owners and operators
- Endorser
 - Vendors
 - Consultants
 - Industry associations
 - ICT service customers

Participants

- Single data centre or corporate level
 - Corporate > 40% of facilities
- Select a new or an existing data centre
 - Measurement
 - Best Practices
 - Reporting

Participants

- Partial or Full Participant
 - Full participants control
 - Software, IT & Data Centre
 - Partial Participants control only part
 - e.g. Colo providers
 - Required to endorse other practices



Becoming a Signatory

Participants

- Participants include
 - Intel
 - TelecityGroup



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Endorsers

- Organisations
 - Vendors
 - Consultancies
 - Utilities
 - Government
 - Industry associations & standards bodies
 - Service consumers



Becoming a Signatory

Endorsers

- Support and promote the goals of the code
 - Products, consultancy, services
 - Programmes, education
 - Labelling
 - Supplier selection criterion



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Endorsers

- Endorsers include
 - The Green Grid
 - HP (inc Critical Facilities)
 - Keysource
 - Hitec



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Existing market confusion

- Too many simplistic “ten tips data centre”
- Mixture of engineering terms with product and marketing names
- No coherent set of expert strategy
- Most available information is not vendor neutral

**There is more to an efficient
data centre than just
measuring PUE**

Your PUE will probably get worse before it gets better

Best Practices

- Establish a common vocabulary and terminology
- Broad coverage, most people are non-expert in some area(s) of the data centre

Best Practices

- Provide operators with an understanding of
 - Available technology options
 - Relative merits
 - Processes they should establish
 - Communication that is necessary
 - Relationships between technology areas

Best Practices

- Are guidance to operators
- Given values 1-5 (min-max)
- Practice values should not be summed for an “overall score”
 - Scorecards do not work in the data centre

Best Practices

- Set the minimum standard for participants
- Current metrics create mixed incentives
- Practices were identified as the measure of commitment and activity
- Many contributors requested a higher barrier to entry

Group Involvement

- “Establish an approval board containing representatives from all disciplines (software, IT, facilities, suppliers)
- Require approval for any significant decision to ensure that the impacts of the decision have been properly understood.”

Environmental

- “Rack air flow management – Blanking plates”
- “Rack air flow management – Air flow direction”
- “Review and if possible raise target IT equipment intake temperature”
 - New ASHRAE specifications
 - ETSI expanded from 2012

Environmental

- “Review and if possible increase the working humidity range”
 - New ASHRAE specifications – 5.5C dew point
 - ETSI expanded from 2012
- “Review set points for air or chilled water system”



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Use as a procurement tool



Use as a procurement tool

Who is using the CoC?

- UK Government
 - CIOs requested to adhere to the CoC
- Commercial customers
 - Validate supplier claims
 - Benchmark internally and externally



Use as a procurement tool

How can you use the CoC?

- Internal
 - Benchmark against a useful external standard
 - Justify money and energy saving practices



Use as a procurement tool

How can you use the CoC?

- Procuring services or data centre space
 - Start at the basic level
 - Require Participant status of your suppliers
 - Full Participant, Partial Participant or Endorser?

How can you use the CoC?

- Procuring services or data centre space
 - Drive further cost and energy efficiency
 - Use the Best Practice reporting form as a standardised response format to compare potential suppliers
 - Request suppliers to provide energy metering data



Use as a procurement tool

How can you use the CoC?

- Procuring services or data centre space
 - Help your supplier be efficient
 - Allow them to virtualise
 - Help them implement air flow management
 - Don't block temperature increases



Use as a procurement tool

How can you use the CoC?

- Apply pressure to vendors
 - Specify efficient hardware and software
 - Buy equipment with the widest environmental specifications
 - Buy equipment with the correct air flow direction



Use as a procurement tool

Training

- BCS is delivering a qualification and training course
 - Understand the goals and practices
 - How to achieve and maintain compliance
 - How to apply for Participant or Endorser status
 - Demonstrate you are serious about energy management
 - Evaluate and compare suppliers' claims



Use as a procurement tool

Training

- First candidates are sitting the beta course and exam next month
- Course and exam due for launch November
 - With the November updates to the Code included



Use as a procurement tool

Services

- Vendors and consultancies offer
 - Assistance in applying for Participant status
 - Assistance in auditing your performance against the code
 - Products to assist with compliance



Use as a procurement tool

Annual update

- First year review now underway
 - Energy metering and reporting
 - Best Practice review and update
 - November release



Thank you

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